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CONTENTS

DISCOVERIES AND CURRENT EVENTS:—		Austria	3
Angola: Locust Movements		Egypt	4
(<i>Nomadacris septemfasciata</i>		Great Britain	5
and <i>Locusta migratoria mi-</i>		Iran	5
<i>gratorioides</i>)	I	Irish Free State	6
Palestine: Notes on Pest Inci-		Latvia	6
dence during Recent Years	I	Mexico	6
Southern Rhodesia: Locust		New Zealand	7
Invasion, 1932-1937. . . .	2	Palestine	8
Italian Somaliland: Locusts	2	Rumania	8
LEGISLATIVE AND ADMINISTRA-		Sweden	8
TIVE MEASURES:—		Tunis	9
South Africa (Union of). . .	2	RECENT BIBLIOGRAPHY	10
Germany (Saar)	2		

INTERNATIONAL INSTITUTE OF AGRICULTURE

PLANT PROTECTION SECTION

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A NEW SERIES OF STUDIES OF WORLD PRODUCTION AND TRADE

IN AGRICULTURAL PRODUCTS

The first two numbers of a new series of surveys of the principal agricultural products on the world markets were completed in January 1937. These represent the result of a new plan of work by the Institute inaugurated in 1934 to show the position of agriculture in relation to international trade. They are designed to provide a factual background to show changes and effects of various economic policies and their influence upon the welfare of the agricultural industry.

The first two studies covered cotton and meat, and other commodities will be taken in turn.

ALREADY ISSUED:—

- No. 1 – **WORLD COTTON PRODUCTION AND TRADE** (Rome, 1936, XII + 464 pp., 8vo., with maps and diagrams). PRICE: 30 LIRE.
- No. 2 – **INTERNATIONAL TRADE IN MEAT** (Rome, 1936, XII + 424 pp., 8vo., with diagrams). PRICE: 25 LIRE.

IN PREPARATION:—

- No. 3 – **WORLD PRODUCTION OF MEAT**
- No. 4 – **FATS AND OILS: WORLD PRODUCTION AND TRADE**

JUST PUBLISHED:—

RECUEIL DE COEFFICIENTS ET D'ÉQUIVALENCES

(PUBLISHED IN FRENCH ONLY)

ROME, 1937, 296 pp., in 16mo.

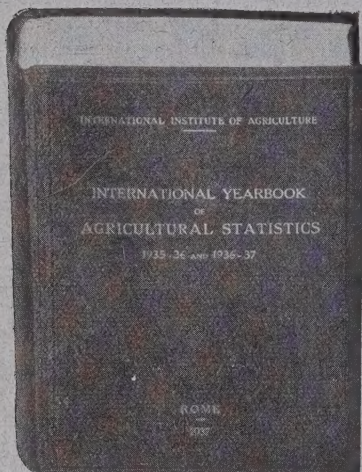
PRICE: 15 LIRE.

This new edition (fifth) comprises far more detailed information than was published in 1922. It includes countries which did not appear therein previously, takes account of changes which have come about in the system of weights and measures in use in various countries, and contains a brief summary of the numerous changes in the value of different currencies since the pre-war period up to the present day. The number of tables of equivalents has been doubled.

The first four editions, now out of print, show that this volume has met with a favourable reception from the public.

IN PREPARATION:—

INTERNATIONAL YEARBOOK OF AGRICULTURAL STATISTICS, 1937-38



Volume XXI, about 1000 pp., 8vo.

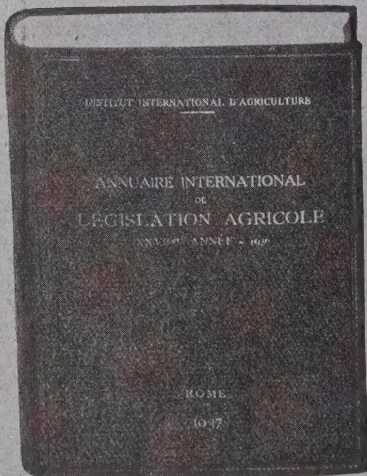
PRICE: 100 Lire. Cloth bound 105 Lire
(post free)

The *International Yearbook of Agricultural Statistics* now in its XXth volume (the 1st volume was published in 1912) is an indispensable work for all who undertake studies having any connection with production, trade or prices of agricultural products. Each volume is the result of the most extensive and detailed inquiry made up to the present in the field of international agricultural statistics.

The preparation of the new volume (XXIst) which will also contain the data referring to the first months of 1938, is so far advanced that it is hoped to publish this edition for 1937-38 during the month of May next.

All orders, accompanied by the purchase price, which reach the Institute (Bureau for sale of publications) between now and the end of March 1938, will give the subscribers the right to the bound volume at the rate of 100 lire (post free) instead of 105.

ANNUAIRE INTERNATIONAL DE LÉGISLATION AGRICOLE, 1937



Volume XXVII, about 1000 pp., 8vo.

(In French only)

PRICE: 85 Lire. Cloth bound 90 Lire (post free)

The *International Yearbook of Agricultural Legislation*, of which the XXVIth volume has now been published, today represents, on account of the complete collection of laws classified systematically in the different volumes from 1911 to the present time, a reference book which Governments and those interested in the study of agricultural questions consider indispensable for the compilation of new draft laws, and for the completion of any study which involves a knowledge of the agricultural legislation of the different nations.

The preparation of the new volume (the XXVIIth) which will contain the texts of the laws passed in 1937, is proceeding in such a way that publication is expected for June 1938.

All orders, accompanied by the purchase price, which reach the Institute (Bureau for sale of Publications) between now and the end of April 1938, will give the subscribers the right to the bound volume at the rate of 85 lire (post free) instead of 90.

The radio communiqués of the International Institute of Agriculture will be transmitted between 2.45 and 2.52 p. m. on the following days: Thursday, English and German; Saturday, Spanish; Tuesday, Italian and French.

They will be broadcast from Rome II (245.5 m.) and Rome 2 RO 4 (25.4 m.).

The hour of broadcasts is in Central European Time, which is one hour ahead of Greenwich Mean Time, and 5 hours ahead of Eastern Standard Time in the United States.

INTERNATIONAL BULLETIN OF PLANT PROTECTION

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DISCOVERIES AND CURRENT EVENTS *

Angola: Locust Movements (*Nomadacris septemfasciata* and *Locusta migratoria migratorioides*) †

During the month of February, 1937, the occurrence of swarms, egg-laying and hoppers in different parts of the Colony was reported.

In the circumscription of Duque de Bragança, Malanga Province 3,580 kg. of eggs were collected, and in the Dondo commune, Luanda Province, 12,340 kg. of hoppers were destroyed.

Palestine: Notes on Pest Incidence during Recent Years §

The following list gives those insects which have been of special interest: —

Ceratitis capitata. During the last three seasons this insect has proved to be of increasing importance as a pest of citrus. In certain areas it did very considerable damage and was the cause of numerous rejections of packed fruit for export by the Fruit Inspection Service. The effect on the insect of this year's severe winter cannot yet be ascertained but it would seem that the Mediterranean Fruit Fly must be regarded now as a major pest of citrus.

Myopardalis pardalina. Assumed epidemic status in the summer of 1935. Owing to the disturbances it was not possible to observe whether the 1936 season gave an equally serious attack, but in 1935 the sweet melon crop suffered very severe damage all through the coastal plain.

There was an interesting local outbreak of *Locusta migratoria* in its migratory phase in Acre sub-district. Small marching swarms were formed but no flying swarms arose from them.

* Under this and the next heading the countries are arranged in French alphabetical order.

† Communication from Mr. JORGE DE BARROS RODRIGUES QUEIROZ, 'Ingénieur agronome', Director of the Laboratory of Plant Pathology and Agricultural Entomology, Luanda, attached as Technical Adviser to the Locust Control Services, transmitted to the Institute by the Government General of the Colony.

§ Communication from the Official Correspondent of the Institute, Mr. E. BALLARD, Chief Plant Protection Officer, Department of Agriculture and Fisheries, Jerusalem, Palestine.

Lepidosaphes beckii is spreading with some rapidity in the Jaffa and Petah-Tiqvah areas. These two places being the foci of infection. This spread has been gaining increasing momentum during the last two years.

Empoasca benedettoi is proving a serious pest of potatoes and evidence so far accumulated points to its being the carrier of a virus as yet unidentified. Research on this question is still in progress.

The very wide spread damage caused by *Capnodis carbonaria* and *C. tenebrionis* is causing anxiety to stone fruit growers and threatens seriously to hinder the development of hill districts. *C. carbonaria* and *C. tenebrionis* are the subject of intensive research.

Southern Rhodesia: Locust Invasion, 1932-1937 *

Monthly Report No. 58. September, 1937.

The month of September, as was the case last year, has shown a decided increase in the activity of the Red Locust (*Nomadacris septemfasciata*, Serv.) and swarms have been reported from most parts of the Colony. The majority of these swarms have been described as 'large' and in two instances the swarm was reported as 'enormous', one of these taking eight hours to pass over a single point, flying with a following wind.

The direction of flight has included most points of the compass and no particular trend has been apparent, but the Colony has gradually been penetrated from the N. E. and also apparently from the west.

Slight damage to growing wheat was reported in one district.

Italian Somaliland: Locusts †

During the months of August, September, October and November, 1937, no locusts were observed in the Colony.

LEGISLATIVE AND ADMINISTRATIVE MEASURES

South Africa (Union of). — The Act No. 42 of 26 May, 1937, which shall be called the Weeds Act, 1937, provides for the eradication of certain weeds. (*Union Gazette Extraordinary*, Cape Town, 26th May, 1937, Vol. CVIII, No. 2443, pp. cx-cxvii).

Germany (Saar). — By Police Ordinance of 24 August, 1937, relative to preventing insecticides employed in the control of the Colorado beetle [*Leptinotarsa decemlineata*] becoming harmful to man, domestic animals, and bees,

* Communication from the official correspondent of the Institute, Mr. RUPERT W. JACK, F. E. S., Chief Entomologist, Department of Agriculture, Salisbury, Southern Rhodesia.

† Communication from Dr. MARTINO VIDOTTO, Acting Chief of the Agricultural Bureau of Italian Somaliland, Mogadiscio, transmitted to the Institute by the Government of the Colony.

measures have been taken in the circumscription of St. Wendel, identical to those introduced in the Hamburg district by Ordinance of 7 August, 1937 [see this *Bulletin*, 1937, No. 10, p. 225]. (*Amtliche Pflanzenschutzbestimmungen*, Berlin, 1. Oktober 1937, Bd. IX, Nr. 7, S. 147-148).

*** By Police Ordinance of 3 September, 1937, the control of field-voles [*Arvicola*] has been made compulsory. The regulations established in this respect correspond exactly to the dispositions introduced by Police Ordinance of 12 October, 1935, into the Westphalia province [see this *Bulletin*, 1936, No. 2, p. 31]. (*Ibid.*, S. 148-149).

Austria. — A Decree published on 21 August, 1937 and come into force on 15 September following, establishes the restrictions to be applied to the import and transit of plants in order to prevent the introduction of dangerous diseases and pests.

As a general rule, it is stipulated that the import and transit of consignments which may bring about the introduction of dangerous diseases and pests are prohibited.

The competent authorities dealing with plant protection are required to inspect consignments from abroad, to ascertain that the accompanying certificates are in order, and if necessary, to notify the Federal Ministry of Agriculture which shall decide as to the advisability of admitting the consignment.

The certificates which accompany the consignments should be drawn up not only in the language of the exporting country, but also in German.

Immediately on arrival at the custom-house, the said consignments shall be forwarded to the Federal Station of Plant Protection, Vienna.

Consignments of living plants with adhering earth are authorized for import and transit if the regulations relative to grape phylloxera (*Phylloxera vastatrix*) are followed. These consignments should also be accompanied by an import permit issued by the Federal Ministry of Agriculture, and a certificate of health and origin relative to the San José scale (*Aspidiotus perniciosus*) and the Colorado beetle (*Leptinotarsa decemlineata*).

In respect of living plants and parts of living plants without adhering earth, distinction is made between: (1) deciduous plants; (2) bulbs and ornamental plants; (3) fresh apples and pears; (4) vegetables (including tomatoes and egg-plants), and (5) other living plants.

For the first category, with particular reference to fruit trees, consignments are required to be free from adhering earth, and should conform with the dispositions relative to grape phylloxera and be accompanied by an import permit issued by the Federal Ministry of Agriculture and a certificate of health and origin testifying that the said consignments are exempt from the San José scale, the Colorado beetle and any other dangerous disease or pest.

The certificate should also testify that the consignment has been thoroughly disinfected by means of hydrocyanic acid gas and carefully sealed by the official Service of Plant Protection.

For the second category, the consignment should be exempt from any adhering earth. The certificate of health and origin should testify to the absence of any dangerous disease or pest, the Colorado beetle in particular.

Consignments of fresh apples and pears should be accompanied by a certificate of health and origin testifying in particular to the absence of the San José scale and the apple maggot (*Rhagoletis pomonella*).

With regard to the fourth category, import from countries recognized as being menaced by the invasion of the Colorado beetle, is prohibited during the period from 1 April to 14 November. Imports are authorized for the remaining part of the year in the case of tomatoes and egg-plants, however, a certificate, is required testifying that these are free from any dangerous disease or pest especially the San José scale and the Colorado beetle.

The aforesaid dispositions do not apply to the grape-vine, the import of which is regulated by the International Phylloxera Convention, to Cactaceae, cut flowers, potatoes, which are subject to special regulations, to fruits, with the exception of apples and pears; to cucumbers, melons, pumpkins, beans and green peas, etc.; to sugar beets, endive, cereals, leguminous plants and seeds; to plants and parts of plants, dried, ground, or preserved in any manner whatsoever.

The regulations also apply to consignments in transit. However, no restriction is made, if the consignment bills prove that the products in question, being forwarded direct from one foreign country to another, are only passing through the country. The products should also be dispatched in sealed packings or in sealed trucks.

The following countries and regions are considered to be menaced by the Colorado beetle:— United States of America, Belgium, Canada, the regions of Germany situated on the left bank of the Rhine, European France (Corsica excepted), Limburg Province in the Netherlands, Grand Duchy of Luxemburg, cantons of Berne, Geneva, Neuchâtel, and Vaud in Switzerland. (*Bundesgesetzblatt für den Bundesstaat Österreich*, Wien, 31. August 1937, Jahrg. 1937, 72. Stück, S. 1298).

Egypt. — By Decree of 26 July, 1937, *Orthezia insignis* and *Aulacaspis pentagona* are declared pests of fruit trees.

The Governorship of Alexandria has been declared infested by *O. insignis*; the said Governorship as well as the 'Markaz' de Kafr el Dawar, have been declared infested by *A. pentagona*.

Transport, by any means whatsoever, of all trees, shrubs, or plants also parts of same and their fruits from infested localities to any other district is prohibited. However, transport will be authorized by means of a special permit issued by the Ministry of Agriculture.

Throughout the entire Egyptian territory, the sale or marketing of trees, shrubs, plants, parts of plants and fruits, infested by the two aforesaid scale insects, is prohibited.

In the localities declared infested, the measures established by Law No. 16 of 1916 may be applied, in particular, the treatment of the trees by fumigation or spraying, until the said trees are recognized as being sound by the Ministry

of Agriculture. If the proprietor may not wish to carry out fumigation or other control measures, for all or part of the trees in his orchard, he will be required to uproot and burn these trees, otherwise, all trees, without exception, will be treated. Before executing the above-mentioned control measures, the trees should be cleared and pruned by the proprietor, otherwise, these operations shall be carried out, at the owner's expense, by officials of the Ministry. (*Journal officiel du Gouvernement Egyptien*, Le Caire, 2 août 1937, 64^{ème} année, n° 69, p. 6-7).

* * A Decree of 21 August, 1937, establishes, for the year 1937, the dates previous to which the roots of cotton plants, 'til' (*Hibiscus cannabinus*) and 'bamia' (*H. esculentus*) should be uprooted or cut below the level of the soil in order to prevent the growth of new shoots, with a view to controlling cotton pests. (*Ibid.*, 2 septembre 1937, n° 80, p. 4).

Great Britain. — An Act dated on 6 July, 1937 and which may be cited as the Hydrogen Cyanide (Fumigation) Act, 1937, regulates the fumigation of premises and articles (including any ship, vehicle or aircraft) with hydrogen cyanide.

This Act shall not extend to Northern Ireland. (*1 Edw. 8. & 1 Geo. 6, Ch. 45*, London, 1937, 6 pp.).

* * By Decree of 12 July, 1937, the import in England and Wales of certain varieties of living plants and certain fresh vegetables having been grown in France, Belgium, Germany and Luxemburg is authorized.

A distinction is made between the plants which may be introduced throughout the year and others which are only available at certain periods of the year. The list of plants allowed throughout the year corresponds exactly with that of the plants of English origin admitted, by Ministerial Decree of 12 April, 1937, for import into France [see this *Bulletin*, 1937, No. 7, pp. 154-155, paragraph c]. During the period from 1 October to 7 April only, the following species may be imported:— *Euonymus japonicus*, *Genista* (*Cytisus canariensis* and *C. fragrans*), and *Hydrangea hortensis* (= *H. hortensia*).

During this last-mentioned period, import shall also be allowed of all living plants not included in the aforesaid list, provided that they are free from any adhering earth.

The list of fresh vegetables comprises asparagus, French beans, green peas, peeled onions and white endive. The import of these vegetables is limited to the period from 8 April to 14 October.

All consignments imported in conformity with this general rule must be accompanied by respective certificates. (*Deutsches Handels-Archiv*, Berlin, 15. August 1937, 91. Jahrg., S. 305-306).

Iran. — The Decree No. 7876 of 14 January, 1936, establishes the general regulations relative to plant protection.

The import of plants, seed, and other parts of plants used for propagation is not permissible unless on previous authorization by the Minister of Agriculture.

This authorization shall only be accorded if the country of origin disposes of a Plant Protection Service, and if the consignments are accompanied by a health certificate issued by the said Service.

The custom-houses authorized to receive and inspect the consignments of plants, etc., shall be designated by the Minister of Agriculture.

Potatoes and cotton-seed may only be imported by the Minister of Agriculture.

Any person observing the presence of diseases or pests on the imported plants, etc., should immediately communicate with the Ministry of Agriculture.

A central organization for the inspection and control of seeds will be designated by the Minister of Agriculture.

The Minister of Agriculture is authorized to take all the necessary measures in order to prevent the spread of plant diseases and pests.

The officials of the custom-houses shall inspect all plants, etc. brought by travellers, or arriving at the frontier by post, or in any other manner whatsoever. The plants, etc., for which the above-mentioned import permit has not been given, or which are forwarded to a custom-house no longer authorized to carry out inspection, will be destroyed.

In cotton mills, all waste residues must be destroyed by fire. (*Deutsches Handels-Archiv*, Berlin, 1. Oktober 1937, 91. Jahrg., S. 3585-3586).

Irish Free State. — By the Noxious Weeds (Thistle, Ragwort, and Dock) Order, 1937, dated 7 May, 1937, thistle [*Cnicus*], ragwort [*Senecio jacobaea*], and dock [*Rumex*] shall be noxious weeds in the Irish Free State. (*Saorstát Éireann. Statutory Rules and Orders. 1937. No. 103, Dublin, [1937], 3 pp.*).

* * By the Agricultural Seeds (Seeds of Injurious Weeds) Regulations, 1937, dated 10 June, 1937, each of the following weeds shall be an injurious weed, namely docks and sorrels (*Rumex* spp.), buttercups (*Ranunculus* spp.), ox-eye daisy (*Chrysanthemum leucanthemum*, L.), soft brome grass (*Bromus mollis*, L. and other species).

The percentage of the seeds of any such weed which may be contained in any agricultural seeds shall be three per cent. of the weight of such agricultural seeds. (*Ibid.*, 1937, No. 161, [1937], 3 pp.).

Latvia. — The Decree No. 33 of 31 March, 1937 gives the list of products for use in the control of plant diseases and pests, which are admitted duty-free. (*Deutsches Handels-Archiv*, Berlin, 1. October 1937, 91. Jahrg., S. 3689).

Mexico. — By 'Acuerdo' of 29 June, 1937, the Banks of Land Credit and Agricultural Credit, as well as private enterprises and semi-official and official institutions which are directly or indirectly connected with plant production,

shall cooperate with the ' Secretaría de Agricultura y Fomento ' in the control of agricultural pests and diseases, and particularly in respect of campaigns established for the control of the pink bollworm (*Pectinophora* [*Platyedra*] *gossypiella*) and the boll weevil (*Anthonomus grandis*) of the cotton plant, complying with all the existing and future regulations which may be decreed on this subject. (*Diario Oficial*, México, 16 de julio de 1937, tomo CIII, núm. 14, pág. 3).

New Zealand. — By Special Order made by the Wairewa County Council on 9 March, 1937 and published by the Minister of Agriculture on 23 March, 1937 hemlock (*Conium maculatum*) has been declared to be a noxious weed within the County of Wairewa. (*The New Zealand Gazette*, Wellington, April 1, 1937, Numb. 22, p. 948).

* * By Special Order made by the Pohangina County Council on 10 March, 1937 and published by the Minister of Agriculture on 1 April, 1937, milk or variegated thistle (*Silybum*) has been declared to be a noxious weed in the County of Pohangina. (*Ibid.*, April 8, 1937, Numb. 23, p. 977).

* * By Special Order made by the Makara County Council on 12 March, 1937 and published by the Minister of Agriculture on 8 April, 1937, hemlock [*C. maculatum*] has been declared to be a noxious weed in the County of Makara. (*Ibid.*, April 15, 1937, Numb. 24, p. 1013).

* * By Special Order made by the Horowhenua County Council on 9 April, 1937 and published by the Minister of Agriculture on 15 April, 1937, goat's rue (*Galega officinalis*) and tutsan (*Hypericum androsaemum*) are declared noxious weeds within the County of Horowhenua. (*Ibid.*, April 22, 1937, Numb. 25, p. 1035).

* * By Special Order made by the Ashburton County Council on 9 April, 1937 and published by the Minister of Agriculture on 21 April, 1937, hemlock [*C. maculatum*] has been declared to be a noxious weed within the County of Ashburton. (*Ibid.*, April 29, 1937, Numb. 28, p. 1068).

* * By Special Order made by the Mauriceville County Council of 10 April, 1937 and published by the Minister of Agriculture on 26 April, 1937, hemlock [*C. maculatum*], gorse [*Ulex europaeus*], pennyroyal [*Hedeoma pulegioides*], and broom [*Cytisus scoparius*] are declared to be noxious weeds, and Canadian or Californian thistle [*Cnicus arvensis*] has been declared not to be a noxious weed, in the County of Mauriceville. (*Ibid.*).

* * By Special Order made by the Waimairi County Council on 28 April, 1937 and published by the Minister of Agriculture on 3 May, 1937 hemlock (*C. maculatum*) has been declared to be a noxious weed within the boundaries of the Waimairi County. (*Ibid.*, May 6, 1937, Numb. 30, p. 1100).

* * By Special Order made by the Hutt County Council on 19 March, 1937 and published by the Minister of Agriculture on 31 May, 1937, hemlock [*C. maculatum*] has been declared to be a noxious weed within the County of Hutt. (*Ibid.*, June 3, 1937, Numb. 37, p. 1299).

* * By Resolution passed by the Ohinemuri County Council on 8 July, 1937 and published by the Minister of Agriculture on 22 July, 1937, the said County agrees to assume responsibility for the administration of the Noxious Weeds Act, 1928, and amendments thereof, within the Ohinemuri County, as from the 1st August, 1937. (*Ibid.*, July 29, 1937, Numb. 49, p. 1730).

* * By Special Order made by the Matamata Borough Council on 19 July, 1937 and published by the Minister of Agriculture on 9 August, 1937, silver poplar (*Populus nivea*) has been declared to be a noxious weed within the Borough of Matamata. (*Ibid.*, August 12, 1937, Numb. 53, p. 1808).

Palestine. — The rules made by the High Commissioner on 30 August, 1937 and which may be cited as the Control of Export of Citrus Rules, 1937, contains, *inter alia*, the following measures:—

(a) All citrus fruit exported shall be free from diseases, bruises, mechanical and physiological injuries.

(b) Citrus fruit shall be free of scale insects, provided that up to fifteen scale per fruit will be allowed if not more than two per centum of fruit in a case is so affected, and provided that either the Chief Horticultural Officer or the Chief Fruit Inspector may, at his discretion, pass scale-marked citrus fruit for export, if a process of cleansing has been employed by the exporter which is not likely to cause mechanical injury or the breakdown of such fruit.

(c) Citrus fruit marked with sooty mould or fumagine to the total extent of more than one square centimetre shall not be exported if more than two per centum of the fruit in a case is so affected.

(d) Citrus fruit marked with hail, thrips, or other scars to the total extent of an area equivalent to that covered by a one mil coin shall not be exported if more than two per centum of the fruit in a case is so affected. (*Hadar*, Tel-Aviv, Palestine, October, 1937, Vol. X, No. 10, pp. 203-206).

Rumania. — The Ministerial Ordinance No. 134.343 of 9 July, 1937, establishes the measures to be taken with a view to destroying dodder. (*Monitorul Oficial*, București, 13 Iulie 1937, an. 105, nr. 158, pag. 6283).

Sweden. — The Royal Decree No. 747 of 21 July, 1937 establishes the measures to be taken with a view to the control of the Colorado beetle (*Leptinotarsa decemlineata*). (*Svensk författningssamling*, Stockholm den 27 juli 1937, nr 747, sid. 1593-1594).

Tunis. — A Decree of 5 August, 1937 (28 djoumada 1356) establishes *inter alia* the following dispositions:—

The Director of Economic Affairs may authorize, by Decrees, the importation of certain shoots, cuttings and plants with roots of the grape-vine.

Any plants with roots, underground stems, tubers, bulbs, rhizomes and in a general way, all underground parts of plants in the living state are only authorized for import if free from all particles of earth. If earth is still adhering to the roots, the plants are washed at the custom-house, at the expense of the importer.

The plants and parts of same, which should be accompanied by a certificate of health and origin, may be imported into Tunis *via* sea or land.

By sea route, these plants may only be introduced through the ports of Bizerte, Tunis, Sousse, Sfax, and Gabès.

By land route, the importation of these plants is authorized by the custom-houses of Ghardimaou and Rhilane, but in these two cases inspection is carried out at Tunis and the transit through Ghardimaou or Rhilane is effected according to the rules of international transit. The import of these plants is also authorized through the Tunisian custom-house of Babouch, in accordance with the conditions established by Decree of the Director of Economic Affairs.

These plants may only be introduced during the period of 15 October to 15 May, with the exception of flower bulbs which may be imported from 1 August, after inspection by one of the officers specially appointed for this purpose by the Director of Economic Affairs.

The circulation and use of grape-vines or parts of grape-vines having roots may only take place in accordance with the conditions determined by Decrees of the Director of Economic Affairs. These Decrees deal chiefly with the mode of operation of preliminary disinfection.

Grape-vine plants or parts of same, even if subjected to a preliminary disinfection, if provided with roots, either fresh or dried, may not be transported from infected zones or protection zones to healthy areas.

The circulation of grape-vine cuttings deprived of roots is not affected.

The establishment of nurseries intended for the sale of plants with roots is dependent on a preliminary authorization given by Decree of the Director of Economic Affairs. The proprietors of these nurseries are required to permit inspection by officers of the Administration and to conform to the instructions given by these officers with regard to the selection and purity of varieties and to the measures to be taken to prevent the spread of grape phylloxera.

The list of nurserymen and the varieties which they are allowed to propagate is published each year by the Administration.

By derogation of the preceding dispositions, wine-growers without preliminary authorization, may establish nurseries of American grape-vines intended solely for the requirements of their own farm.

However, these nurseries are still subject to compulsory declaration and control effected by the officers of the Administration.

The Director of Economic Affairs determines by Decree the maximum extent of these nurseries, which should be proportionate to the surface area of the vineyards for which they are intended.

When the presence of grape phylloxera has been recognized, the Director of Economic Affairs passes a Decree declaring the infection of all or part of the property containing the diseased vines, and if necessary of other adjoining properties.

This declaration of infection involves the following consequences:—

(I) In the areas attacked by grape phylloxera and in the adjoining protection zones, the extent of which is determined by the Phylloxera Delegate on the advice of the obligatory General Syndicate of Vine-growers:—

(1) The destruction by fire of stems, props, poles, leaves, shoots and other objects which may serve as a vehicle for grape phylloxera.

(2) Disinfection of the soil in the areas infected with grape phylloxera and of all or only part of the protection zones.

(3) Entry into these areas is prohibited unless authorized by the Phylloxera Delegate.

(4) Prohibition of any new planting of the grape-vine before a period of five years calculated from the last year of the discovery of the pest, has passed.

(II) Throughout the extent of the areas declared infected:— the adoption of all measures considered suitable for preventing the extension of the pest, as the partial or complete destruction of the grape-vines, besides the regulation dispositions, in agreement with the proprietor.

If grape phylloxera makes its appearance in an important region of Tunisian wine-growing in such a way that the new focus owing to its central position constitutes a danger for all the districts cultivating grape-vines, and renders control measures impracticable, the territory of the Regency shall, on the counsel of the Obligatory General Syndicate of Wine-growers and the Commission for Grape Phylloxera, be divided into wine-growing circumscriptions where the dispositions relative to the infected areas and protection zones will no longer be applicable and where the cultivation of grape-vines of any origin shall be permitted.

The Director of Economic Affairs shall establish by Decrees subsequent to the date of promulgation of the present Decree, the delimitation of these circumscriptions. He shall impose inside these zones all protection measures such as treatments in the requisite proportion. (*Journal Officiel Tunisien*, Tunis, 6 août 1937, 55^e année, n° 63, p. 967-969).

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